CLAIMS

1. An apparatus authentication information inclusion system, which comprises a providing server and a terminal and is used for including apparatus authentication information in said terminal as information used by an apparatus authentication server to authenticate said terminal wherein:

said providing server provides source information used as a source for generating apparatus authentication information to said terminal and provides said apparatus authentication information or said source information to said apparatus authentication server for authenticating said terminal; and

said terminal stores information as information necessary for transmitting said apparatus authentication information by using said received source information and, at a terminal authentication time, transmits said apparatus authentication information generated from said source information by using said stored information to said apparatus authentication server.

2. The apparatus authentication information inclusion system according to claim 1 wherein:

said providing server provides said terminal with a conversion value obtained as a result of a conversion

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process carried out by using a predetermined directional-function on apparatus authentication information generated from said source information;

said terminal generates a conversion value by execution of a conversion process using said predetermined directional-function on apparatus authentication information generated from said received source information; and

said terminal compares said generated conversion value with said conversion value received from said providing server to produce a result of determination as to whether said generated conversion value is equal to said received conversion value.

3. The apparatus authentication information inclusion system according to claim 1 wherein:

said terminal provides said providing server with a conversion value obtained as a result of a conversion process carried out by using a predetermined directional-function on apparatus authentication information generated from said source information;

said providing server generates a conversion value by execution of a conversion process using said predetermined directional-function on apparatus authentication information generated from said received

source information; and

said providing server compares said generated conversion value with said conversion value received from said terminal to produce a result of determination as to whether or not said generated conversion value is equal to said received conversion value.

4. A terminal comprising:

source-information acquisition means for acquiring source information provided by a providing server as a source used for generating apparatus authentication information;

generation means for generating apparatus authentication information from said acquired source information; and

apparatus authentication information transmission means for transmitting said generated apparatus authentication information to an apparatus authentication server at an apparatus authentication time.

5. The terminal according to claim 4 wherein:

said source information is encrypted apparatus authentication information obtained as a result of a process to encrypt said apparatus authentication information; and

said generation means generates said apparatus

authentication information by decrypting said encrypted apparatus authentication information.

6. The terminal according to claim 4, further comprising storage means for encrypting apparatus authentication information generated by said generation means and storing a result of encrypting said apparatus authentication information, wherein said apparatus authentication information transmission means decrypts apparatus authentication information stored in said storage means and transmits a result of decrypting said apparatus authentication information.

7. The terminal according to claim 6, further comprising key generation means which is used for generating an encryption key for processes to encrypt apparatus authentication information to be stored into said storage means and decrypt apparatus authentication information stored in said storage means by using information peculiar to said terminal when it is desired to utilize said encryption key.

8. The terminal according to claim 7, further comprising key deletion means for deleting said generated encryption key within a predetermined period right after use of said encryption key.

9. The terminal according to claim 4, further

comprising:

conversion-value acquisition means for acquiring a conversion value obtained as a result of a conversion process carried out by using a predetermined one-directional function on said apparatus authentication information from said providing server;

conversion-value computation means for computing a conversion value by execution of a conversion process using said predetermined one-directional function on said generated apparatus authentication information; and

determination means for producing a result of determination as to whether or not said acquired conversion value is equal to said computed conversion value.

10. The terminal according to claim 9, further comprising:

conversion-value computation means for computing a conversion value by execution of a conversion process using another one-directional function on said generated apparatus authentication information; and

conversion-value-providing means for providing said computed conversion value to said providing server.

11. The terminal according to claim 4, further comprising:

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conversion-value computation means for computing a conversion value by execution of a conversion process using a predetermined one-directional function on said generated apparatus authentication information; and

conversion-value-providing means for providing said computed conversion value to said providing server.

12. The terminal according to claim 4, further comprising storage means for storing said acquired source information, wherein said apparatus authentication information transmission means generates apparatus authentication information from said stored source information and transmits said apparatus authentication information to said apparatus authentication server.

13. An apparatus authentication information processing method adopted in a terminal implemented as a computer comprising source-information acquisition means, generation means and apparatus authentication information transmission means, said apparatus authentication information processing method including:

a source-information acquisition step of driving said source-information acquisition means to acquire source information provided by a providing server as a source used for generating apparatus authentication information;

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an generation step of driving said generation means
to generate apparatus authentication information from
said acquired source information; and

an apparatus authentication information
transmission step of driving said apparatus
authentication information transmission means to transmit
said generated apparatus authentication information to an
apparatus authentication server at an apparatus
authentication time.

14. The apparatus authentication information
processing method according to claim 13 whereby:

said source information is encrypted apparatus
authentication information obtained as a result of a
process to encrypt said apparatus authentication
information; and

at said generation step, said apparatus
authentication information is generated by decrypting
said encrypted apparatus authentication information.

15. The apparatus authentication information
processing method according to claim 13, further
including a storage step of encrypting apparatus
authentication information generated by said generation
means and storing a result of encrypting said apparatus
authentication information into storage means also

employed in said computer whereby, at said apparatus authentication information transmission step, apparatus authentication information stored in said storage means is decrypted and transmitted.

16. The apparatus authentication information processing method according to claim 15 wherein said computer further comprises key generation means, said apparatus authentication information processing method further including a key generation step of driving said key generation means to generate an encryption key prior to use of said encryption key in processes to encrypt apparatus authentication information to be stored into said storage means and decrypt apparatus authentication information stored in said storage means by using information peculiar to said terminal.

17. The apparatus authentication information processing method according to claim 16 wherein said computer further has key deletion means, said apparatus authentication information processing method further including a key deletion step of driving said key deletion means to delete said generated encryption key within a predetermined period right after use of said encryption key.

18. The apparatus authentication information

processing method according to claim 13 wherein said computer further comprises conversion-value acquisition means, conversion-value computation means and determination means, said apparatus authentication information processing method further including:

a conversion-value acquisition step of driving said conversion-value acquisition means to acquire a conversion value obtained as a result of a conversion process carried out by using a predetermined one-directional function on said apparatus authentication information from said providing server;

a conversion-value computation step of driving said conversion-value computation means to compute a conversion value by execution of a conversion process using said predetermined one-directional function on said generated apparatus authentication information; and

a determination step of driving said determination means to produce a result of determination as to whether or not said acquired conversion value is equal to said computed conversion value.

19. The apparatus authentication information processing method according to claim 18 wherein said computer further comprises conversion-value computation means and conversion-value-providing means, said

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apparatus authentication information processing method further including:

a conversion-value computation step of driving said conversion-value computation means to compute a conversion value by execution of a conversion process using another one-directional function on said generated apparatus authentication information; and

a conversion-value-providing step of driving said conversion-value-providing means to provide said computed conversion value to said providing server.

20. The apparatus authentication information processing method according to claim 13 wherein said computer further comprises conversion-value computation means and conversion-value-providing means, said apparatus authentication information processing method further including:

a conversion-value computation step of driving said conversion-value computation means to compute a conversion value by execution of a conversion process using a predetermined one-directional function on said generated apparatus authentication information; and

a conversion-value-providing step of driving said conversion-value-providing means to provide said computed conversion value to said providing server.

21. The apparatus authentication information processing method according to claim 13 wherein said computer further comprises storage means for storing said acquired source information and, at said apparatus authentication information transmission step, apparatus authentication information is generated from said stored source information and transmitted to said apparatus authentication server.

22. An apparatus authentication information processing program to be executed by a computer to implement:

a source-information acquisition function of acquiring source information provided by a providing server as a source used for generating apparatus authentication information;

a generation function of generating apparatus authentication information from said acquired source information; and

an apparatus authentication information transmission function of transmitting said generated apparatus authentication information to an apparatus authentication server at an apparatus authentication time.

23. The apparatus authentication information processing program according to claim 22 wherein:

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said source information is encrypted apparatus authentication information obtained as a result of a process to encrypt said apparatus authentication information; and

said generation function generates said apparatus authentication information by decrypting said encrypted apparatus authentication information.

24. The apparatus authentication information processing program according to claim 22, said apparatus authentication information processing program further comprising a storage function of encrypting apparatus authentication information generated by said generation function and storing a result of encrypting said apparatus authentication information, wherein said apparatus authentication information transmission function decrypts apparatus authentication information stored by said storage function and transmits a result of decrypting said apparatus authentication information.

25. The apparatus authentication information processing program according to claim 24, further comprising a key generation function, which is to be executed by a computer to generate an encryption key for processes to encrypt apparatus authentication information to be stored by said storage function and decrypt

apparatus authentication information stored by said storage function by using information peculiar to said terminal when it is desired to utilize said encryption key.

26. The apparatus authentication information processing program according to claim 25, further comprising a key deletion function to be executed by a computer to delete said generated encryption key within a predetermined period right after use of said encryption key.

27. The apparatus authentication information processing program according to claim 22, further comprising:

a conversion-value acquisition function to be executed by said computer to acquire a conversion value obtained as a result of a conversion process carried out by using a predetermined one-directional function on said apparatus authentication information from said providing server;

a conversion-value computation function to be executed by said computer to compute a conversion value by execution of a conversion process using said predetermined one-directional function on said generated apparatus authentication information; and

a determination function to be executed by said computer to produce a result of determination as to whether or not said acquired conversion value is equal to said computed conversion value.

28. The apparatus authentication information processing program according to claim 27, further comprising:

a conversion-value computation function to be executed by said computer to compute a conversion value by execution of a conversion process using another one-directional function on said generated apparatus authentication information; and

a conversion-value-providing function to be executed by said computer to provide said computed conversion value to said providing server.

29. The apparatus authentication information processing program according to claim 22, further comprising:

a conversion-value computation function to be executed by said computer to compute a conversion value by execution of a conversion process using a predetermined one-directional function on said generated apparatus authentication information; and

a conversion-value-providing function to be

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executed by said computer to provide said computed

conversion value to said providing server.

30. The apparatus authentication information

processing program according to claim 22, further

comprising a storage function to be executed by said

computer to store said acquired source information,

wherein said apparatus authentication information

transmission function generates apparatus authentication

information from said stored source information and

transmits an apparatus authentication information to said

apparatus authentication server.

31. A storage medium, which can be read by a

computer and is used for storing an apparatus

authentication information processing program to be

executed by said computer to implement:

a source-information acquisition function of

acquiring source information provided by a providing

server as a source used for generating apparatus

authentication information;

a generation function of generating apparatus

authentication information from said acquired source

information; and

an apparatus authentication information

transmission function of transmitting said generated

apparatus authentication information to an apparatus
authentication server at an apparatus authentication time.

32. A providing server comprising:

source-information-providing means for providing a
terminal with source information used as a source for
generating apparatus authentication information;

apparatus authentication information providing
means for providing said apparatus authentication
information or said source information to an apparatus
authentication server for authenticating said terminal;

conversion-value acquisition means for acquiring a
conversion value obtained as a result of a conversion
process carried out by using a predetermined one-
directional function on apparatus authentication
information generated on the basis of said source
information from said terminal;

conversion-value computation means for computing a
conversion value by execution of a conversion process
using said one-directional function on said apparatus
authentication information; and

determination means for producing a result of
determination as to whether or not said acquired
conversion value is equal to said computed conversion
value.

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33. The providing server according to claim 32,

further comprising determination-result transmission

means for transmitting a determination result produced by

said determination means to a main organization for

including said source information.

34. An apparatus authentication information

providing method to be adopted in a computer, which

comprises source-information-providing means, apparatus

authentication information providing means, conversion-

value acquisition means, conversion-value computation

means, and determination means, to execute:

a source-information-providing step of driving said

source-information-providing means to provide a terminal

with source information used as a source for generating

apparatus authentication information;

an apparatus authentication information providing

step of driving said apparatus authentication information

providing means to provide said apparatus authentication

information or said source information to an apparatus

authentication server for authenticating said terminal;

a conversion-value acquisition step of driving said

conversion-value acquisition means to acquire a

conversion value obtained as a result of a conversion

process carried out by using a predetermined one-

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directional function on apparatus authentication information generated on the basis of said source information from said terminal;

a conversion-value computation step of driving said conversion-value computation means to compute a conversion value by execution of a conversion process using said one-directional function on said apparatus authentication information; and

a determination step of driving said determination means to produce a result of determination as to whether or not said acquired conversion value is equal to said computed conversion value.

35. The apparatus authentication information providing method according to claim 34, comprising a determination-result transmission step of driving determination-result transmission means additionally employed in said computer as further means for transmitting a determination result produced by said determination means to a main organization for including said source information.

36. An apparatus authentication information providing program to be executed by a computer to carry out:

a source-information-providing function of

providing a terminal with source information used as a source for generating apparatus authentication information;

an apparatus authentication information providing function of providing said apparatus authentication information or said source information to an apparatus authentication server for authenticating said terminal;

a conversion-value acquisition function of acquiring a conversion value obtained as a result of a conversion process carried out by using a predetermined one-directional function on apparatus authentication information generated on the basis of said source information from said terminal;

a conversion-value computation function of computing a conversion value by execution of a conversion process using said one-directional function on said apparatus authentication information; and

a determination function of producing a result of determination as to whether or not said acquired conversion value is equal to said computed conversion value.

37. The apparatus authentication information providing program according to claim 36, further comprising a determination-result transmission function

to be executed by said computer to transmit a
determination result produced by said determination
function to a main organization for including said source
information.

38. A storage medium, which can be read by a
computer and is used for storing an apparatus
authentication information processing program to be
executed by said computer to implement:

a source-information-providing function of
providing a terminal with source information used as a
source for generating apparatus authentication
information;

an apparatus authentication information providing
function of providing said apparatus authentication
information or said source information to an apparatus
authentication server for authenticating said terminal;

a conversion-value acquisition function of
acquiring a conversion value obtained as a result of a
conversion process carried out by using a predetermined
one-directional function on apparatus authentication
information generated on the basis of said source
information from said terminal;

a conversion-value computation function of
computing a conversion value by execution of a conversion

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process using said one-directional function on said

apparatus authentication information; and

a determination function of producing a result of

determination as to whether or not said acquired

conversion value is equal to said computed conversion

value.